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Application No. 10/791,536  
Attorney Docket No. 8964-000010/US**REMARKS**

Favorable reconsideration of this application in light of the preceding amendments and the following remarks is respectfully requested.

No claims having been canceled or added, the Applicants respectfully submit that claims 1-24 remain properly under consideration in this application.

**Claim Objections**

Claim 23 stands objected to for various informalities as detailed in the Action. Action at 2. The Applicants respectfully submit that the amendments to the claims reflected above are sufficient to address and overcome each of the identified informalities.

The Applicants submit that as recited in the claims, the term "the ornamental fish" refers to those fish which are the "selected" transgenic progeny identified in claim 1, specifically at element (b). The Applicants submit that the amendment to claim 23 reflected above is sufficient to clarify this relationship.

The Applicants respectfully request, therefore, that these objections be withdrawn.

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Application No. 10/791,536  
Attorney Docket No. 8964-000010/US**Rejections under 35 U.S.C. § 112, First Paragraph**

Claims 1-24 stand rejected under 35 U.S.C. § 112, first paragraph, Action at 2-3, as failing to provide sufficient enablement for the method as applied to transgenic viviparous species.

The Applicants submit that the amendments to the claims reflected above are sufficient to limit the claims to oviparous species for which enablement has been previously noted. Accordingly, the Applicants submit that the amendments to the claims reflected above are sufficient to overcome this rejection.

The Applicants respectfully request, therefore, that these rejections be withdrawn.

**Rejections under 35 U.S.C. § 112, Second Paragraph**

Claims 1-24 stand rejected under 35 U.S.C. § 112, second paragraph, Action at 3-4, as indefinite, particularly with regard to the "screening" operation recited in claim 1 and the inclusion of live-bearing species in claim 17.

The Applicants submit that the amendments to the claims reflected above are sufficient to clarify that it is the mature "transgenic progeny" that are to be screened. The Applicants further submit that the amendments to the claims reflected above are sufficient to remove any reference to viviparous species from the pending claims. Accordingly, the Applicants submit that the amendments to the claims reflected above are sufficient to overcome this rejection.

The Applicants respectfully request, therefore, that these rejections be withdrawn.

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Application No. 10/791,536  
Attorney Docket No. 8964-000010/US**Rejections under 35 U.S.C. § 102**

Claims 1, 2, 5-9 and 23 stand rejected under 35 U.S.C. § 102(b) as anticipated by the previously referenced Lawson and Weinstein article ("Lawson") in the journal *Developmental Biology*. Action at 5. Claims 1, 2, 5-9 and 23 also stand rejected under 35 U.S.C. § 102(a) as anticipated by the Fadool article ("Fadool") in the journal *Developmental Biology*. The Applicants respectfully traverse this rejection for the reasons detailed below.

The Applicants maintain that neither Lawson nor Fadool teach the methods as recited in the pending claims. In particular, the Applicants submit that Lawson demonstrated the expression of EGFP driven by *fli1* promoter in zebrafish. The promoter of gene *fli1*, an endothelial cell marker, was used to show mosaic EGFP expression pattern in the "blood vessels" of the zebrafish. The Applicants further submit that Fadool demonstrated the expression of EGFP driven by a *Xenopus* rhodopsin gene promoter and focused on studying the developmentally regulated mosaic pattern of the "rod photoreceptors of retina" in zebrafish by expressing EGFP under the control of rhodopsin promoter from *Xenopus*.

The Applicants further contend that as disclosed by Lawson and Fadool, the promoters utilized, specifically *fli1* and rhodopsin respectively, were fused to EGFP in order to study the development of blood vessels or photoreceptors of retina in zebrafish. The Applicants contend that the expression of a gene is highly dependent on the type of promoter with which it is associated. The Applicants submit that, in general, the promoter will determine the characteristics of the expression of the transgene expression including, for example, the specific amount, the specific location and/or the specific developmental stage at which the transgene is

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expressed. The applied references, for example, utilized limited EGFP expression in specific tissues, such as blood vessels or retina, due to the specificity of the promoters utilized.

The Applicants contend that the present disclosure teaches that the expression of EGFP need not be limited to certain tissues of the transgenic fish but rather, through the use of an ubiquitous promoter, such as a  $\beta$ -actin promoter, EGFP can be expressed systemically throughout the whole fish. The Applicants have summarized the differences between the claimed invention and the applied references in TABLE 1, *infra*.

TABLE 1

Referenced Document	The claimed invention	Lawson and Weinstein (Developmental Biology 248:307-318)	Fadool (Developmental Biology 258:277-290)
Phenotypes			
Fluorescence localization	Systemic	Mosaic	Mosaic
Developmental stage of fluorescence appearance	Larva and adult fish	Larva and adult fish	Larva and adult fish
Fluorescence phenotype for ornamental use	Yes	No	No

The Applicants maintain, therefore, that the applied references, whether considered singly or in combination, do not provide the teaching and/or suggestion sufficient to allow one of ordinary skill in the art to the claimed method for developing transgenic ornamental fish.

The Applicants, therefore, request that these rejections be reconsidered and withdrawn accordingly.

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### CONCLUSION

Applicant submits that the claims are in condition for allowance, and requests that the Examiner call the undersigned if any questions arise that can be addressed over the phone to expedite examination of this application.

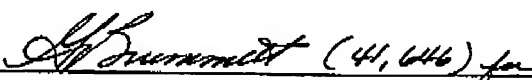
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKY, & PIERCE, P.L.C.

By

  
John A. Castellano, Reg. No. 35,094

P.O. Box 8910  
Reston, Virginia 20195  
(703) 668-8000

JAC/GPB:amc